

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-30 (canceled)

31. (previously presented): A method for administering a macromolecular pharmaceutical substance to a patient, the method comprising delivering a bolus of the substance intradermally via a needle inserted into the patient's skin so that the needle penetrates the intradermal compartment wherein the needle's outlet depth and exposed height of the outlet are located within the intradermal compartment, wherein the outlet has an exposed height of about 0 to 1mm, so that the substance is delivered into the intradermal compartment and distributed systemically exhibiting a higher C_{max} and a shorter T_{max} of the substance, by comparison with subcutaneous administration of the substance at an identical dose and rate of delivery.

32. (previously presented): The method of claim 31 or 67 wherein delivering the substance intradermally comprises injecting the substance intradermally.

33. (currently amended): The method of claim 31 or 67 wherein the administering comprises delivering ~~infusing~~ the substance over a period of from about 2 min to about 10 min.

34. (previously presented): The method of claim 31 or 67 wherein the administering comprises delivering a bolus of the substance over a period of less than 10 minutes.

35. (canceled)

36. (previously presented): The method of claim 73 wherein the needle has a length of from about 0.3 mm to about 2.0 mm.

37. (previously presented): The method of claim 73 wherein the needle is a 30 to 50 gauge needle.

38. (previously presented): The method of claim 73 wherein the needle is configured in a delivery device which positions the needle substantially perpendicular to skin surface.

39. (previously presented): The method of claim 73 wherein the needle is in an array of microneedles.

40. (previously presented): The method of claim 39 wherein the array comprises 3 microneedles.

41. (previously presented): The method of claim 39 wherein the array comprises 6 microneedles.

42. (previously presented): The method of claim 31 or 67 wherein the substance is administered at a volume rate of from about 2 microliters per minute to about 200 milliliters per minute.

43. (previously presented): The method of claim 42 wherein the substance is administered at a volume rate of from about 2 microliters per minute to about 10 milliliters per minute.

44. (previously presented): The method of claim 42 wherein the substance is administered at a volume rate of from about 10 microliters per minute to about 200 milliliters per minute.

45. (previously presented): The method of claim 31 wherein the substance comprises a polysaccharide.

46. (previously presented): The method of claim 31 wherein the substance comprises heparin molecule or a fragment thereof having anticoagulant activity.

47. (previously presented): The method of claim 31 wherein the substance comprises Fragmin®.
48. (previously presented): The method of claim 31 wherein the substance comprises a protein.
49. (previously presented): The method of claim 31 wherein the protein comprises a human growth hormone.
50. (previously presented): The method of claim 31 wherein the substance comprises Genotropin®.
51. (previously presented): The method of claim 42 wherein the rate is constant, variable or combinations thereof.
52. (previously presented): The method of claim 31 wherein the substance comprises a pegylated protein.

Claims 53-66 (canceled)

67. (previously presented): A method for administering a hydrophobic pharmaceutical substance to a patient, the method comprising delivering a bolus of the substance intradermally via a needle inserted into the patient's skin so that the needle penetrates the intradermal compartment wherein the needle's outlet depth and exposed height of the outlet are located within the intradermal compartment, wherein the outlet has an exposed height of about 0 to 1mm, so that the substance is delivered into the intradermal compartment and distributed systemically exhibiting a higher C_{max} and a shorter T_{max} of the substance, by comparison with subcutaneous administration of the substance at an identical dose and rate of delivery.
68. (previously presented): The method of claim 31, wherein the macromolecular pharmaceutical substance has a molecular weight of at least 1000 Da.

69. (previously presented): The method of claim 31, wherein the macromolecular pharmaceutical substance has a molecular weight of at least 2000 Da.

70. (previously presented): The method of claim 31, wherein the macromolecular pharmaceutical substance has a molecular weight of at least 4000 Da.

71. (previously presented): The method of claim 31, wherein the macromolecular pharmaceutical substance has a molecular weight of at least 10,000 Da.

72. (previously presented): The method of claim 31, wherein the macromolecular pharmaceutical substance has a molecular weight of greater than 10,000 Da.

73. (previously presented): The method of claim 31 or 67, wherein administering the substance comprises the step of inserting the needle into the subject's skin so that the needle penetrates the intradermal compartment, and the needle's outlet depth and exposed height of the outlet are located within the intradermal compartment.